

**REPLY AFFIDAVIT OF
GARETH EVAN LYN JONES**

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

DYSON TECHNOLOGY LIMITED and)
DYSON, INC.,)
)
Plaintiffs,) C.A. No. 05-434 (GMS)
v.)
)
MAYTAG CORPORATION,)
)
Defendant.)

REPLY AFFIDAVIT OF GARETH EVAN LYN JONES

COUNTRY OF ENGLAND)
 : ss.
COUNTY OF WILTSHIRE)

GARETH EVAN LYN JONES, being duly sworn, deposes and says:

1. I submit this reply affidavit in further support of the motion for a preliminary injunction brought by Dyson, Inc. and Dyson Technology Limited (collectively, "Dyson"). Unless otherwise specified, the capitalized terms used in this affidavit shall have the meanings ascribed to them in my affidavit of 25 July, 2005 (the "Jones Aff."), which I am informed was filed with the Court on 29 July, 2005.

2. I have received the Affidavit of Charles D. DeGraff, dated 25 August, 2005 (the "DeGraff Aff."), which I am informed Maytag Corporation ("Maytag") has submitted to the Court, along with certain other papers, in opposition to Dyson's motion for a preliminary injunction. Mr. DeGraff does not take issue with, and apparently agrees with, the vast majority of the opinions expressed by me in my prior affidavit and, with two exceptions, does not dispute that Maytag's Hoover Fusion has the separate elements of various dependent claims of the patents-in-suit.

Rather, he attempts to show the absence of a small number of elements necessary to establish Maytag's infringement of the Patents in Suit. It is my opinion that assertions by Mr. DeGraff in his affidavit purporting to show the absence of these elements are without merit. I continue to conclude that the Hoover Fusion infringes claim no. 14 of the '515 Patent; claim nos. 15, 16 and 17 of the '748 Patent; claim nos. 1, 2, 3, 7, 11, 23, 24 and 25 of the '008 Patent; and claim nos. 1, 2, 3, 7, 13 and 14 of the '038 Patent.

3. As was the case in my prior affidavit, I have interpreted the various claim elements discussed below as one of ordinary skill in the art of cyclonic vacuum cleaner technology would interpret them in light of the patent specifications. The photographs of the Hoover Fusion or its parts referenced below and attached as exhibits to this affidavit were taken by me using a digital camera that I own.

Certain Observations on "Measurements" in the DeGraff Affidavit

4. Before beginning my analysis, I note that in his affidavit, Mr. DeGraff refers in several places to certain measurements of Hoover Fusion parts. See, e.g., DeGraff Aff. ¶ 8 (distance of dirty air inlet from top of container), ¶ 15 (diameter of plastic portion of dirt receiving chamber), ¶ 16 (diameter of "ring area" at the bottom of the outer container), ¶ 31 (location of plastic component containing shroud in relation to air inlet of inner cyclone), ¶ 33 (distance of perforations from bottom of shroud), and ¶ 39 (distance between cone opening and base surface).

5. I find these measurements to be inherently suspect for two reasons. First, it is peculiar that Mr. DeGraff would need to "measure" anything at all on a Hoover Fusion. Presumably Maytag has product specifications and drawings that elaborate on the size, shape and location of parts to be used in the manufacturing

of the Hoover Fusion, and Mr. DeGraff should have referred to those specifications and drawings in his affidavit. I relied exclusively on measurements taken from Hoover Fusions in my affidavit because I did not have access to product specifications and drawings. Second, there is no elaboration whatsoever in the DeGraff Affidavit on the process used to determine these measurements. Mr. DeGraff does not say how many machines were used to obtain the measurements, where these machines came from, who took the measurements, what instruments were used to do the measuring, what exactly was measured (for example, were measurements taken from the top, center or bottom portion of a part), and what the measurement represents (for example, were any or all of the measurements from a single location (or device) or an “average” of several measurements from different locations (or devices)). One might infer that Mr. DeGraff did not himself conduct these measurements and does not know how they were conducted.

The ‘515 Patent

Claim No. 14 of the ‘515 Patent

6. In his affidavit, Mr. DeGraff asserts that four of the elements of claim no. 14 of the ‘515 Patent are absent from the Hoover Fusion. These assertions are not, in my view, correct.

7. First, Mr. DeGraff contends that the Hoover Fusion’s dirty air inlet is not “at an upper portion of the outer container” as required by the claim. (See discussion of Element 14.2 in the Jones Affidavit (¶ 21)). He reaches this conclusion based on (a) his finding that the words “upper portion” must mean “top” of the outer container because that is where the dirty air inlet is located in Figure 1 of the ‘515 Patent and (b) his finding that the Hoover Fusion’s dirty air inlet is not at the “top” of

the outer container, but “is positioned 41% of the distance from the top of the outer container.” (DeGraff Aff. ¶ 8). He is wrong in both respects. A person skilled in the art of cyclonic vacuum cleaner technology would interpret the words “upper portion of the outer container” as used here to mean that the dirty air inlet must be above the midline of the outer container—which Mr. DeGraff concedes is the case here—and not to mean that the dirty air inlet must be at the “top” of the outer container. Indeed, the patent elsewhere refers to the “top” of the outer container (see col. 6, l. 8). Had the patent intended that the dirty air inlet be located at or near the “top” of the outer container, as suggested by Mr. DeGraff, it would have used the word “top” in the claim element as it did elsewhere in the patent.

8. Moreover, the dirty air inlet on the Hoover Fusion is closer to the “top” of the outer container than Mr. DeGraff states. A person skilled in the art of cyclonic technology would understand that the purpose of the outer container is to enclose a volume. Thus the “top” of the container is the uppermost portion of the container that holds a volume. On the Hoover Fusion, this point is where the rubber seal on the component containing the shroud touches the inner surface of the container and encloses the volume in the container. The location of this component is shown in the photographs attached as Exhibit 30. Using a steel ruler, I have determined that the center of the dirty air inlet on the Hoover Fusion is only about 30.7% from this point.

9. Second, Mr. DeGraff states that the Hoover Fusion’s dirty air inlet is not “oriented for supplying dirt laden air into the container tangentially to the interior surface of the outer container” (see discussion of Element 14.3 in the Jones Affidavit (¶¶ 22-23)) because it does not “cause” the air to flow tangentially into the

interior surface of the container. (DeGraff Aff. ¶¶ 9-10). There is no merit to this statement because the claim element on its face requires only that the dirty air inlet be “oriented” for supplying tangential air flow, it does not require that the inlet “cause” the tangential airflow. As I explained in my prior affidavit, a person skilled in the art of cyclonic vacuum cleaner technology would understand this claim element to require that the dirty air inlet be configured to allow dirt laden air sucked up by the vacuum cleaner to flow into the container tangentially to the interior surface of the outer container. (Jones Aff. ¶ 22). The dirty air inlet of the Hoover Fusion is configured to serve this function. (Jones Aff. ¶¶ 22-23). Photographs of the Hoover Fusion’s dirty air inlet are attached as Exhibit 31. As can be seen from the photographs, the dirty air inlet has a tear-drop shape that, when viewed from the side, creates a circular opening allowing for tangential air flow to the interior surface of the outer container. The sole purpose of this shape is to allow air to flow tangentially to the interior surface of the outer container, and Mr. DeGraff does not dispute this.

10. Third, Mr. DeGraff asserts that the Hoover Fusion does not have a “cyclone for receiving an air flow from the air inlet and for maintaining its velocity to a cone opening” (see discussion of Element 14.8 in the Jones Affidavit (¶ 28)) because, in his words, “the Fusion vacuum cleaner does not maintain the velocity of the air, but accelerates it.” (DeGraff Aff. ¶¶ 11-12). This interpretation of the words “maintaining its velocity” is incorrect here. As I explained in my prior affidavit, a person skilled in the art of cyclonic vacuum cleaner technology would understand that the words “maintaining its velocity” as used in the claim element to mean that the conical shape of the cyclone assists in keeping the air flow moving as it makes its way from the air inlet at the top of the cyclone to the smaller opening at the

bottom of the cyclone. These words do not require that the air flow remain at a constant speed. Indeed, such an interpretation in the context of this patent—or any of the Patents in Suit for that matter—makes no sense because it is a recognized principle of cyclonic technology that air entering the top of a cone-shaped cyclone tangentially will continue to rotate (and accelerate) to the bottom of the cyclone. It is the acceleration that creates the centrifugal force necessary to separate finer dust particles from the air. The air accelerates when it flows through the inner cyclone of the preferred embodiments of every one of the Patents in Suit. If Mr. DeGraff is correct, as a practical matter, this claim could never be infringed.

11. Lastly, at ¶¶ 14-17 of his affidavit, Mr. DeGraff contends that the diameter at the end of the Hoover Fusion's dirt receiving chamber furthest from the cone opening is not a minimum of 3 times the diameter of the cone opening, as required by claim no. 14 of the '515 Patent. This contention also is erroneous. As I indicated in my prior affidavit, the diameter of the dirt collection chamber furthest from the cone opening is that located on the rubber-like portion of the chamber that touches the bottom of the container, and that diameter is about 3.11 times the diameter of the cone opening. (Jones Aff. ¶ 34). Mr. DeGraff claims that this rubber-like portion of the dirt collection chamber is not a portion of the dirt collection chamber at all, but is a separate part of the Hoover Fusion that acts as the "ring seal." But the rubber-like material is actually glued to the plastic portion of the dirt collection chamber—forming one component that is not separate or intended to be separable. A photograph of the dirt collection chamber on the Hoover Fusion is attached as Exhibit 15 to my prior affidavit. The fact that this portion of the dirt collection chamber may also perform the function of a ring seal is irrelevant to this claim element. In addition,

as noted in my prior affidavit, even if the relevant diameter of the receiving chamber is viewed as the end of the plastic portion of the chamber—and not the rubber-like extension—that diameter is still 2.97 times the diameter of the cone opening, which rounded to the nearest tenth is still 3 times the diameter of the cone opening. I note that Mr. DeGraff found that this diameter was “2.9 times the diameter of the cone opening.” (DeGraff Aff. ¶ 15) Because Mr. DeGraff only carried out his calculation one decimal place, and not two decimal places, it is unclear if his measurement truly differs from mine. If there is a difference, it may be attributable to the methodology and equipment employed by the measurer. My measurements were based on averages of several measurements of the diameters at issue. (Jones Aff. ¶ 34). Mr. DeGraff—or whomever actually conducted the measurement for Maytag—may only have taken one measurement. In addition, I used sophisticated equipment—including a shadowgraph and a coordinate measuring machine (CMM)—to obtain precise measurements. The measurement in the DeGraff Affidavit may have been obtained using equipment that provides less precise measurements.

12. For the reasons expressed above and in my prior affidavit (see Jones Aff. ¶¶ 19-39), therefore, it continues to be my opinion that the Hoover Fusion infringes claim no. 14 of the ‘515 Patent.

The ‘748 Patent

Claim No. 15 of the ‘748 Patent

13. Mr. DeGraff also contends that four of the required elements of claim no. 15 of the ‘748 Patent are missing in the Hoover Fusion. (DeGraff Aff. ¶ 18). I disagree with this contention.

14. Three of the four elements that Mr. DeGraff claims are absent are the same as three of the elements discussed above in connection with claim no. 14 of the '515 Patent or differ from those elements in ways that are immaterial here. (See DeGraff Aff. ¶¶ 19-25). These are the elements referred to as Elements 14.2, 14.3 and 14.8 in my prior affidavit. (Jones Aff. ¶¶ 21-23 and 28). For the reasons discussed above (¶¶ 7-10), Mr. DeGraff is incorrect. Those three elements are not missing in the Hoover Fusion.

15. The fourth element that Mr. DeGraff maintains is missing concerns the requirement that there be a disc "provided on the outside of the [inner] cyclone intermediate the receiving chamber and the air outlet of the [outer] container." (See DeGraff Aff. ¶¶ 26-27); see also discussion of Element 15.16 in the Jones Affidavit (¶ 47)). Mr. DeGraff claims that the disc "is not on the outside of the cyclone, but is secured about an upper portion of the receiving chamber." (DeGraff Aff. ¶ 27). I disagree. The disc unquestionably is on the outside of the inner cyclone. Indeed, the inside diameter of the disc touches the outer surface of the inner cyclone and is affixed to the outside of the inner cyclone by the same screws that also secure it to the shroud means. The disc is not secured to the dirt receiving chamber. Rather, the dirt receiving chamber twists onto and is secured to the disc. A photograph showing the location of the disc on the inner cyclone is attached as Exhibit 32. Mr. DeGraff also claims that the disc is not "intermediate" the dirt receiving chamber and the air outlet of the container (here, the shroud) because he interprets "intermediate" to mean "in the middle" and concludes that the disc is not so situated. (DeGraff ¶ 27). Again, I disagree. In my opinion, a person of ordinary skill in the art of cyclonic vacuum cleaner technology would understand the word "intermediate" as used here to

mean “between,” not “in the middle.” Interestingly, I note that Mr. DeGraff did not disagree with me that “a position intermediate to the cone opening and the air inlet to the cyclone” as used in claim no. 1 of the ‘008 Patent meant a position below the air inlet to the cyclone and “somewhere” before the cone opening at the bottom of the inner cyclone—not necessarily the midpoint location. (See discussion of Element 1.16 in the Jones Affidavit (¶ 62) (emphasis added)). In any event, the point is academic because the Hoover Fusion’s disc not only is between the shroud and the dirt receiving chamber, but also is in the middle of those two parts. Indeed, the disc on the Hoover Fusion is situated such that it touches both the bottom of the shroud and touches the top of the dirt collection chamber. A photograph showing where the disc is situated in relation to the shroud and the dirt collection chamber is attached as Exhibit 33.

Claim Nos. 16 and 17 of the ‘748 Patent

16. In my prior affidavit, I expressed the opinion that the Hoover Fusion also has each of the elements of claim nos. 16 and 17 of the ‘748 Patent. (Jones Aff. ¶¶ 50-53). Both of these claims are directly or indirectly dependent on claim no. 15 of the ‘748 Patent, but other than the opinions he has expressed as to infringement of claim no. 15, Mr. DeGraff does not dispute that the Hoover Fusion has all the other elements of claim nos. 16 and 17. Thus, if Mr. DeGraff is incorrect with respect to claim no. 15—and, as shown above, he is—then the Hoover Fusion also infringes claim nos. 16 and 17 of the ‘748 Patent.

The '008 Patent

Claim No. 1 of the '008 Patent

17. Mr. DeGraff also opines that six of the elements of claim no. 1 of the '008 Patent are missing in the Hoover Fusion. (DeGraff Aff. ¶¶ 28-35). I disagree.

18. Two of the six elements that Mr. DeGraff claims are absent are materially the same, for present purposes, as two of the elements discussed above in connection with claim no. 14 of the '515 Patent. (See DeGraff Aff. ¶¶ 29-30). These are the elements referred to as Elements 14.3 and 14.8 in my prior affidavit. (Jones Aff. ¶¶ 22-23 and 28). For the reasons discussed above (¶¶ 9-10), I disagree with Mr. DeGraff that any of these elements is missing from the Hoover Fusion.

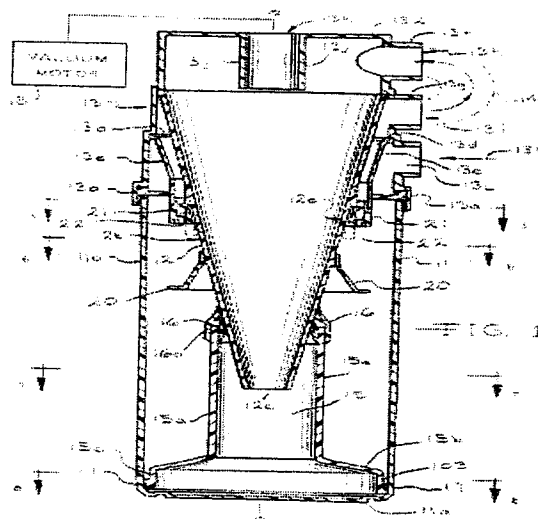
19. The third element that Mr. DeGraff maintains is missing is the requirement that the shroud means be positioned below the air inlet to the cone-shaped cyclone. (See DeGraff Aff. ¶ 31; see also discussion of Element 1.16 in the Jones Affidavit (¶ 62)). Mr. DeGraff contends that "the upper end of the shroud in the Fusion vacuum cleaner is above the top of the cyclone by at least 3/16 inch and, accordingly, above the air inlet to the cyclone." (DeGraff Aff. ¶ 31). This analysis is faulty because Mr. DeGraff apparently is including as part of the shroud referred to in claim no. 1 of the '008 Patent the portion of the plastic component of which the shroud is a part, but which is situated above the shroud and surrounds the air inlet to the inner cyclone. One skilled in the art of cyclonic vacuum cleaner technology, however, would understand that the shroud in this patent element is only the perforated portion of the plastic component that surrounds the outside surface of the inner cyclone. Mr. DeGraff does not dispute that the purpose of the shroud in this

patent is to act like a screen to prevent larger, lightweight fibrous material from escaping the outer container and clogging the inlet to the inner cyclone. (See Jones Aff. ¶ 15; Dyson Aff. ¶ 29). The only portion of the plastic component that performs this screening function is that portion containing the perforations. This portion of the component is several centimeters below the air inlet to the inner cyclone. (Jones Aff. ¶ 62). A photograph showing the location of the shroud on the plastic component is attached as Exhibit 34.

20. Mr. DeGraff also says that the shroud means does not, as required, have “perforations adjacent to the position intermediate to the cone opening.” (DeGraff Aff. ¶ 33). Mr. DeGraff maintains that “the position intermediate to the cone opening” refers to “the other end [of the shroud means]” closest to the cone opening and that the perforations on the Hoover Fusion’s shroud are not “adjacent” this end of the shroud, but rather “are spaced approximately an inch away from such location.” (DeGraff Aff. ¶ 33). There are two reasons this is not correct. First, Mr. DeGraff is reading the term “adjacent” too narrowly. One skilled in the art of cyclonic vacuum cleaner technology would understand the term “adjacent” as used in this claim element to mean only that the perforations be near the position intermediate the cone opening. There is no requirement they be immediately adjacent that position, and the claim does not say or imply as much. Second, contrary to Mr. DeGraff’s assertion, the perforations on the shroud are not “approximately an inch away” from the end of the shroud closest to the cone opening. (DeGraff Aff. ¶ 33). Using Mitutoyo Calipers, I have determined that the perforations on the shroud are less than one-half an inch (or about 11 millimeters or .43 inches) from this location.

In my opinion, this location is “adjacent” the end of the shroud closest to the cone opening.

21. The fifth element supposedly absent from the Hoover Fusion is the requirement of a “disc means provided on the shroud means.” (DeGraff Aff. ¶ 34). Mr. DeGraff asserts that the words “provided on” in this claim element require the disc and shroud to be one integral component. (*Id.*). This interpretation, however, goes too far. Nothing in the patent requires the disc and shroud to be one component. The words “provided on” in this claim element simply mean that the disc be immediately below and touch the bottom of the shroud—which it does here. (Jones Aff. ¶ 65). Contrary to Mr. DeGraff’s contention, the references to having a “combined” disc and shroud in the ‘008 Patent rather than the “separate” disc and shroud in the ‘748 Patent (*see* col. 1, ll. 24-30) do not relate to whether the disc and shroud are “separate” components but whether the disc and shroud are “separate” in terms of distance from one another. As can be seen in Figure 1 of the ‘748 Patent, shown below, the disc (item no. 20) is not touching the bottom of the shroud (item no. 21), but is located some distance below it.



In the '008 Patent, the disc and shroud are "combined" in the sense that they now touch. A photograph illustrating this point is attached as Exhibit 35. It is specious, in my opinion, to differentiate between a disc and shroud that are molded together and a disc and shroud attached together by screws (as is the case here).

22. The sixth, and last, element supposedly absent from claim no. 1 of the '008 Patent is the requirement that the disc be "at a lower longitudinal extent of the shroud means and the air inlet of the cyclone." (DeGraff Aff. ¶ 35). Mr. DeGraff contends that the Hoover Fusion's disc "is well beyond the lower longitudinal extent of the shroud, and even further beyond the recited air inlet." (Id.). This contention is erroneous. The claim element is met if the air inlet is above the shroud, and the disc is at a lower longitudinal extent of the shroud. Contrary to Mr. DeGraff's assertion, the Hoover Fusion's disc is not "well beyond" the lower longitudinal extent of the shroud and air inlet to the inner cyclone. In fact, as can be seen from the photographs attached as Exhibits 33 and 35, it is as close to the shroud and air inlet (which, as discussed (¶ 19), is located above the shroud) as is possible. It is located immediately below and touches the shroud.

Claim Nos. 2, 3, 7 and 11 of the '008 Patent

23. In my prior affidavit, I expressed the opinion that the Hoover Fusion also has each of the elements of claim nos. 2, 3, 7 and 11 of the '008 Patent. (Jones Aff. ¶¶ 68-75). All these claims are dependent on claim no. 1 of the '008 Patent, but other than the opinions he has expressed as to infringement of claim no. 1, Mr. DeGraff does not dispute that the Hoover Fusion has all the other elements of claim nos. 2, 3, 7 and 11 of the '008 Patent. Thus, if the Hoover Fusion infringes

claim no. 1 of the '008 Patent, then it also infringes claim nos. 2, 3, 7 and 11 of that patent.

Claim Nos. 23 through to 25 of the '008 Patent

24. As indicated in my prior affidavit, the elements of claim nos. 23 through to 25 of the '008 Patent are either the same as the elements of claim nos. 1 through to 3 of the '008 patent or differ from those elements in ways that are immaterial here. Thus, for the reasons discussed above (¶¶ 17-22) and in my prior affidavit (Jones Aff. ¶¶ 56-71 and 76), the Hoover Fusion has each of the elements of those claims.

25. For the reasons expressed above and in my prior affidavit (see Jones Aff. ¶¶ 54-76), the Hoover Fusion infringes each of claim nos. 1, 2, 3, 7, 11, 23, 24 and 25 of the '008 Patent.

The '038 Patent

Claim No. 1 of the '038 Patent

26. Mr. DeGraff opines that the Hoover Fusion does not infringe claim no. 1 of the '038 Patent because the distance between the cone opening and the base surface is 72.2 mm, which is outside the range cited in the claim of "less than 8 mm or between 30 mm and 70 mm." (DeGraff Aff. ¶¶ 38-39). This is incorrect for two reasons.

27. First, the distance is not 72.2 mm. Mr. DeGraff fails to provide any detail whatsoever on who conducted this measurement or when or how. As indicated in my prior affidavit, I used a sophisticated coordinate measuring machine to measure two different Hoover Fusions, and determined that the average distance between the cone opening and the base surface was 70.82 mm. (Jones Aff. ¶ 83). In

addition, the accused device performs substantially the same function in substantially the same way to achieve substantially the same result as the claim element, and thus should be deemed the equivalent of that claim element. (*Id.*) Mr. DeGraff does not disagree in this respect.

28. Mr. DeGraff also argues that claim no. 1 of the '038 Patent is not infringed because "the examiner . . . objected to use of the word 'substantially,' throughout the claims" and, therefore, "one skilled in the art . . . would not construe the dimensions or boundaries as being either 'substantially' or 'about' the recited dimensions." (DeGraff Aff. ¶ 40). This is, as much of Mr. DeGraff's other assertions, not correct. I have reviewed the relevant patent histories. Although it is true that the examiner objected to use of the words "substantially" or "about" in connection with certain other claims of the '038 Patent, the initial patent application never included the words "substantially" or "about" in claim no. 1 and, thus, the examiner had no occasion to pass judgment on the propriety of using such terms in regard to that claim. In short, the examiner never "objected" to the use of the word "substantially" with respect to claim no. 1. The Hoover Fusion infringes claim no. 1 of the '038 patent.

Claim Nos. 13 and 14 of the '038 Patent


29. In my prior affidavit, I expressed the opinion that the Hoover Fusion also has each of the elements of claim nos. 13 and 14 of the '038 Patent. (Jones Aff. ¶¶ 91-94). Mr. DeGraff opines that the "upwardly extending annular wall from the base surface" described in these claims is absent from the Hoover Fusion. (DeGraff Aff. ¶ 43). He states that "[t]o the extent that the Fusion vacuum cleaner has a collector with a base surface, any wall associated with the collector is outside of

that base surface.” (Id.). I disagree. As is discussed in my prior affidavit, and as is illustrated in the diagram attached as Exhibit 29 to that affidavit, the Hoover Fusion has an annular wall that extends upwardly from the base surface of the container.

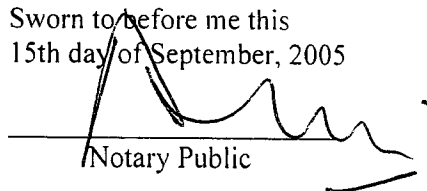
30. For the reasons expressed above and in my prior affidavit (see Jones Aff. ¶¶ 77-94), therefore, the Hoover Fusion infringes claim nos. 1, 2, 3, 7, 13 and 14 of the ‘038 Patent.

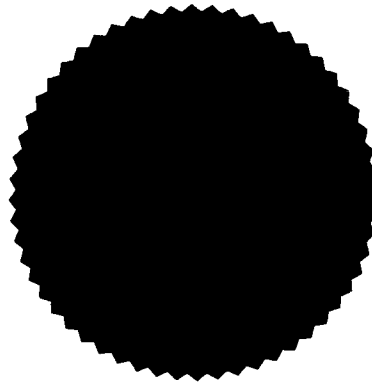
Conclusions

31. The Hoover Fusion infringes the specified claims of the four Patents in Suit.


Gareth Evan Lyn Jones

Sworn to before me this
15th day of September, 2005


Notary Public



APOSTILLE

(Hague Convention of 5 October 1961 / Convention de La Haye du 5 octobre 1961)

UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND

1. Country: United Kingdom of Great Britain and Northern Ireland
Pays: Royaume-Uni de Grande-Bretagne et d'Irlande du Nord

This public document / Le présent acte public

2. Has been signed by **A J Gill**
a été signé par
3. Acting in the capacity of **Notary Public**
agissant en qualité de
4. Bears the seal/stamp of **The Said Notary Public**
est revêtu du sceau/timbre de

5. at London/à Londres
6. Certified/Attesté
the/le **15 September 2005**
7. by Her Majesty's Principal Secretary of State for Foreign and Commonwealth Affairs /
par le Secrétaire d'Etat Principal de Sa Majesté aux Affaires Etrangères et du Commonwealth.

8. Number/sous No **G806657**

9. Stamp:
timbre:
10. Signature: **J. Cooper**



For the Secretary of State / Pour le Secrétaire d'Etat

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Exhibit 30 – Photographs showing position of air inlet relative to outer container on the Hoover fusion

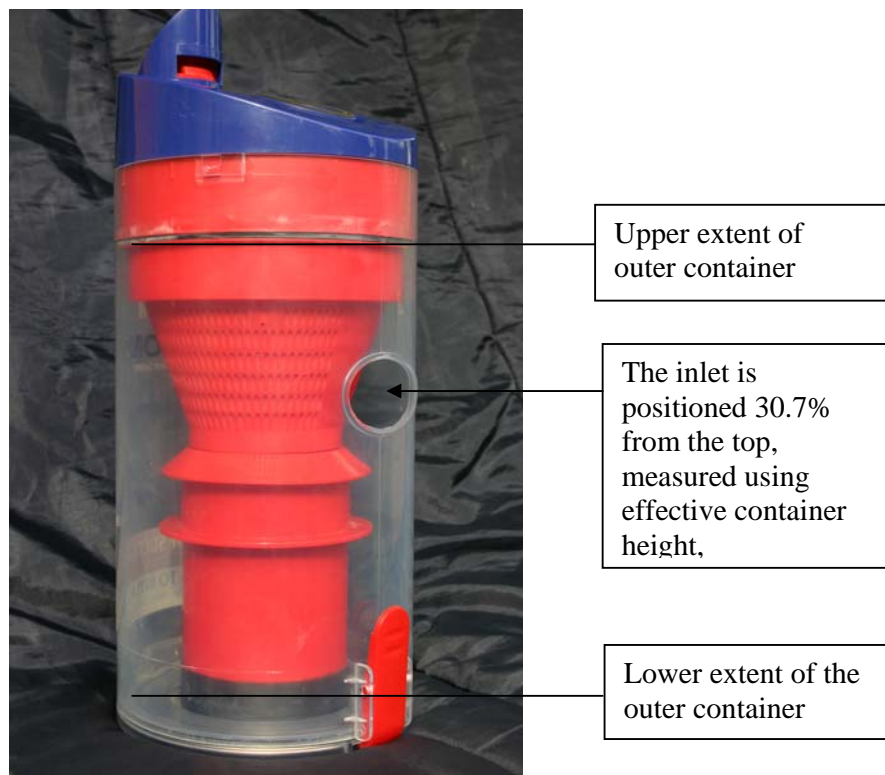


Figure 1 – Position of inlet shown relative to container volume

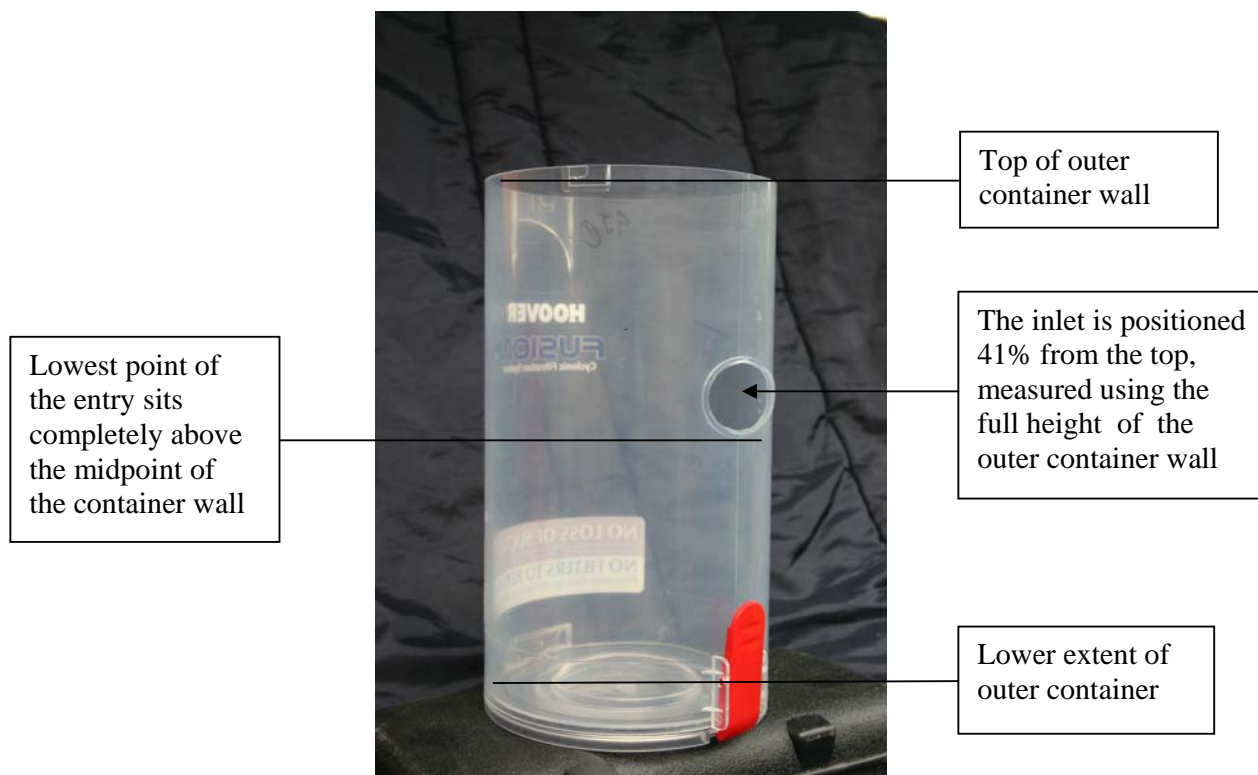


Figure 2 – Position of the inlet shown relative to container wall only

Exhibit 31 – Photographs showing orientation of the dirty air inlet to the outer container on the Hoover Fusion



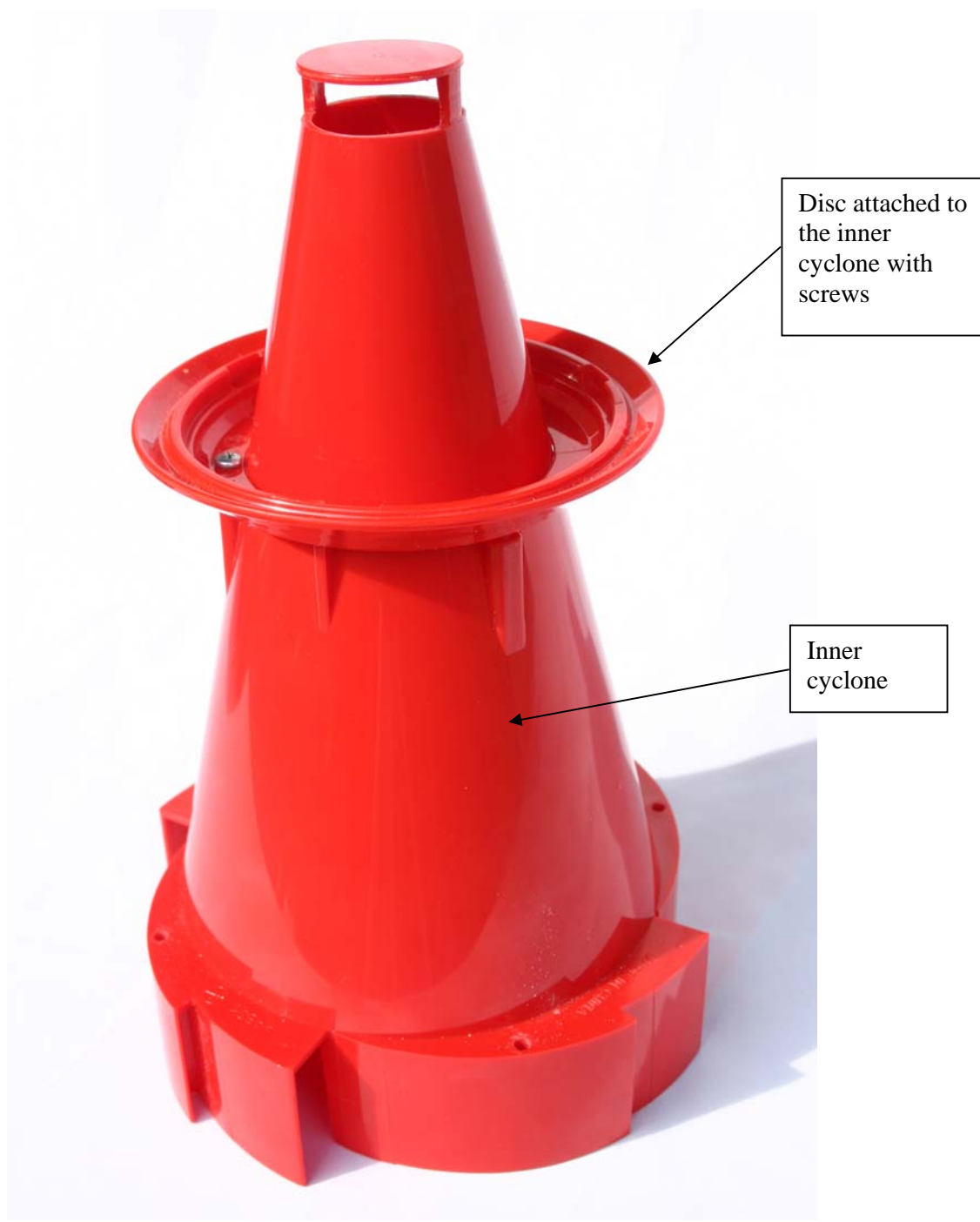
Teardrop shape is oriented for supplying tangential airflow to the inner surface of the outer container



Dirty air inlet

Outer Container

**Exhibit 32 – Photograph showing location of disc on inner cyclone of
the Hoover Fusion**



Note – for clarity the inner cyclone and disc are shown upside down from their normal operating positions. The receiving chamber and the component holding the shroud have also been removed.

Exhibit 33 – Photograph showing where disc is located relative to the shroud and the dirt collection chamber on the Hoover Fusion

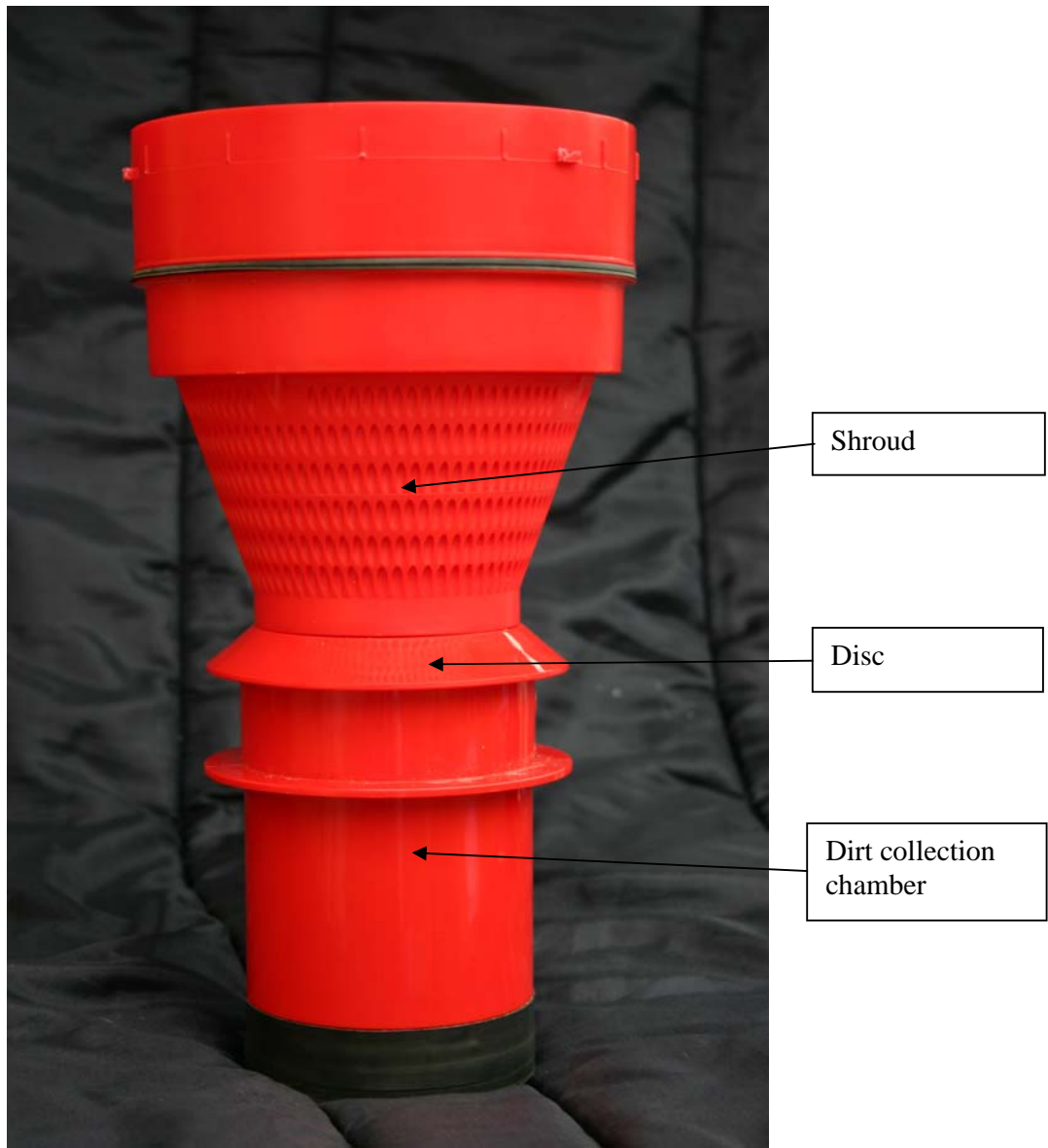


Exhibit 34 - Photograph showing location of shroud in relation to air inlet to the inner cyclone on the Hoover Fusion

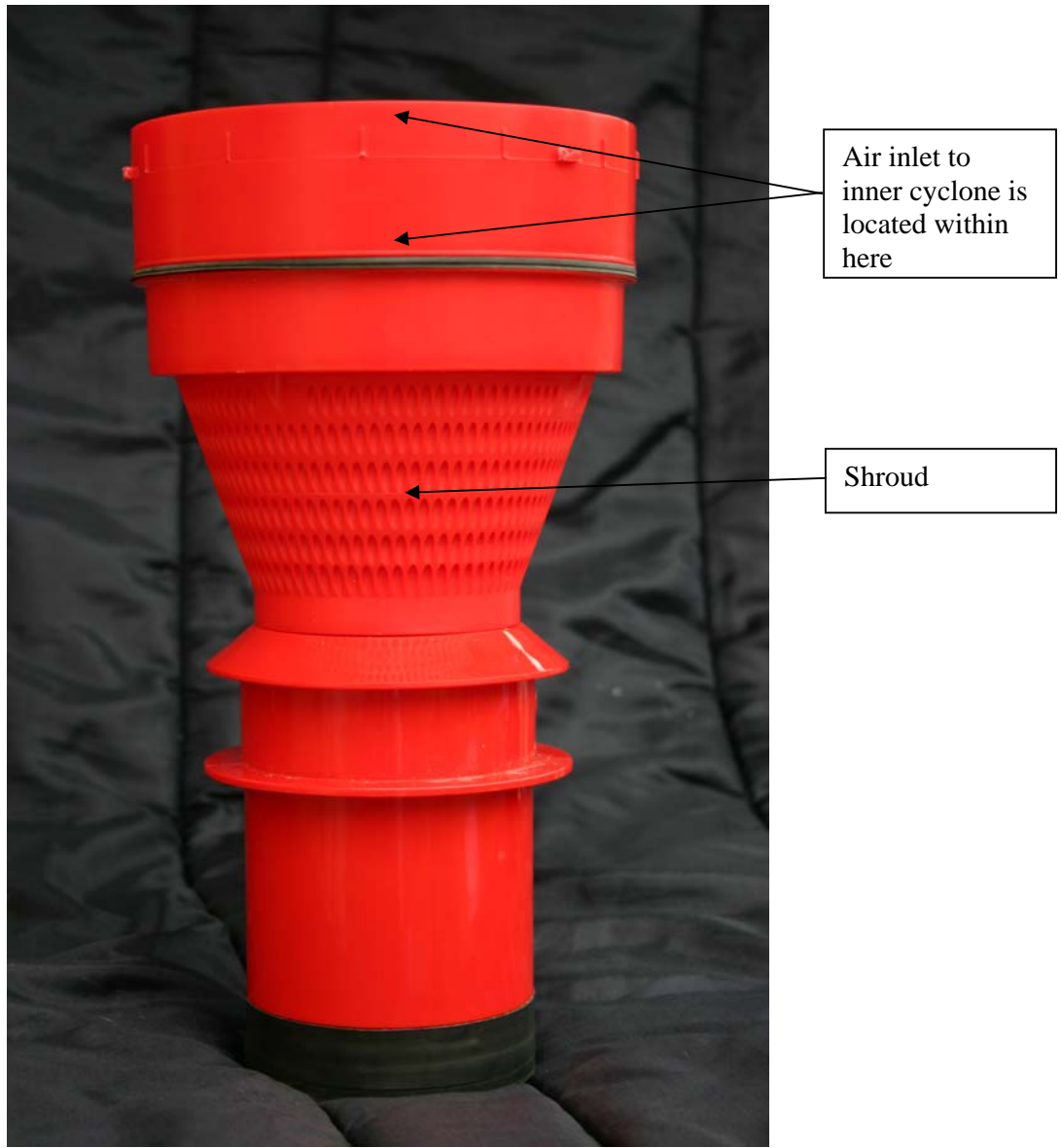
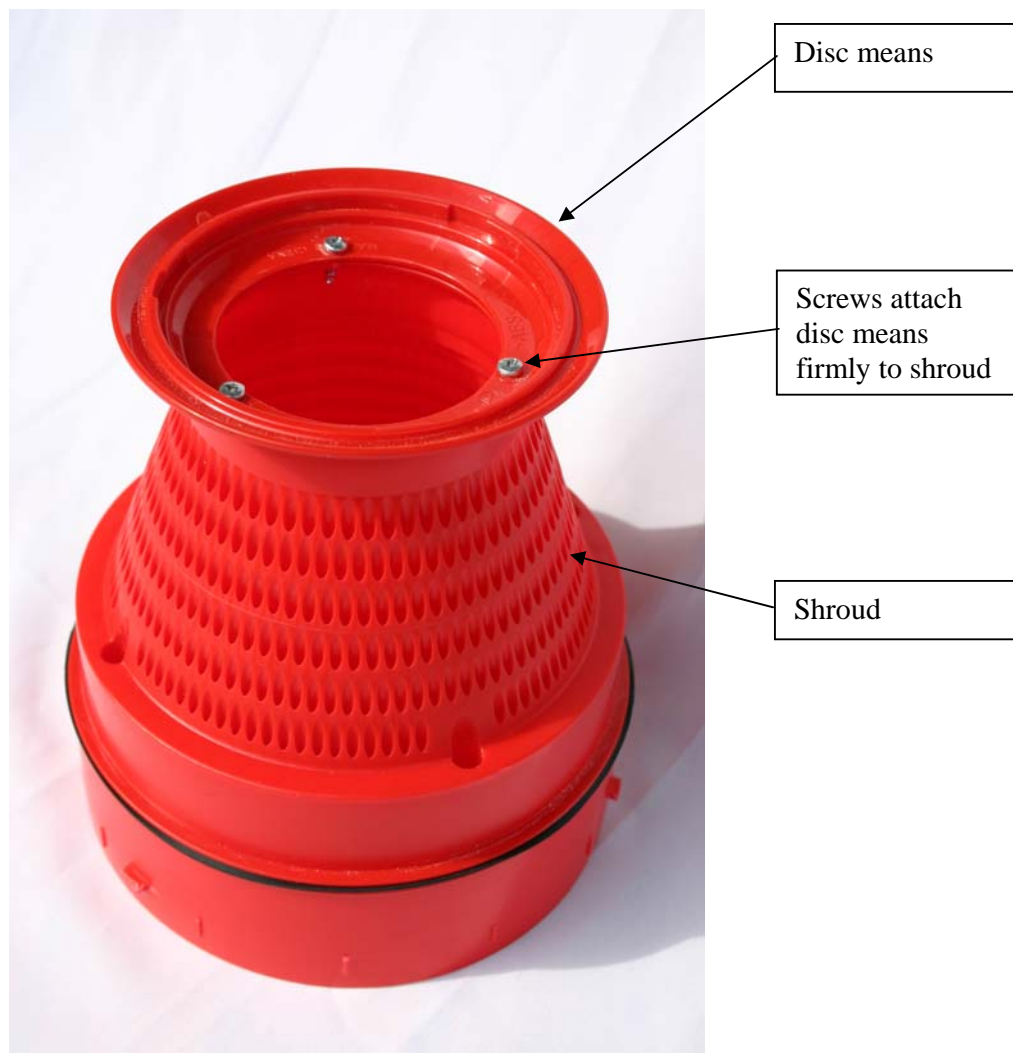


Exhibit 35 – Photograph showing the disc means provided on the shroud of the Hoover cyclone



Note – for clarity the disc and shroud are shown upside down from their normal operating positions, and the receiving chamber and inner cyclone have also been removed